

ANGLE DECIPHERING DEVICE WITH MULTIPLE INTERFACE

BACKGROUND OF INVENTION

Field of invention.

This invention relates to levels, specifically to improve the level by allowing the measure of angular degrees and then transmitting a radio frequency to a another tradesman's receiver packet and triggering an audible alarm for multiple-checking of the tradesman who is using the level work.

Description of prior art.

An audible level known in prior art U.S. Pat. No. 5,313,713 issued May 24, 1994 to Heger et. al. assigned to Zircon Corporation. This level's method of signaling audibly is restricted in it's range by the loudness or decibel of it's electronic alarm. The display of this level is in null form. This device does not give a numerical reading of angular degree. Furthermore, it does not transmit to another tradesman's ear if he/she is out of earshot of the level. So another person may not hear the tone in noiseless, or especially noisy environments. Hearing the tone by a second tradesman would enable a double check of work that may require strict tolerance of a specific angle.

Summary of invention.

This modification to the level will sound an alarm, when a preset angle is reached, in the ear of the holder and in the ear of another tradesman so that at least two people can check the angular position when one person is at a far distance. This modification is important

when quality control is imperative and the environment may not allow multiple people to check an angle.

Brief description of drawings.

FIG. 1. Shows the level with attached transmitter box, antenna, and rotary angle dial- knob.

FIG. 2. Shows the rotary-knob with tilt switch and wiper contacts, knob assembly and knob window.

FIG.3. Shows another view of the knob and how the angular graduations may look.

FIG.4. A hypothetical look at the level transmitting to the receiver.

FIG.5. Shows the transmitter circuit.

Detailed description of invention

This level will turn on an audible alarm 33 by remote control through radio frequency transmission technology. The level has the characteristics of a typical level except it has a angle presetting knob 26 that when set, will position a tilt switch 14 to a corresponding angle and a pendulum limit switch 15 to assure the proper angle triggers the audible alarm. By viewing graduations 32 through a window 12 in the knob 26, the desired angle may be set by lining up a line mark 30. A shaft 11 connects the knob 26 to a spool. The tilt switch 14 is fastened to the spool 24. When the knob 26 is rotated the tilt switch 14 rotates correspondingly. Two wipers 22 contact two rings 16, 18 in the knob assembly 10. The rings 16, 18 and wipers 22 are made of an electrical conducting material so that when a circuit is completed through the tilt switch 14 a transmitter 34, located in the level, turns on. The transmission signal reaches a receiver 35 and turns on an audible

alarm **33** verifying the angle has been reached. Two or more people can verify the angle has been reached if they carry the properly corresponding receivers **35**. If the receivers **35** are of a same frequency and are a part of the system they will correspond to the transmitting level. An antenna **4** will increase range of the transmitter **34** and receiver **35**. The transmitter **34** housed in a box **6** on the level. An on off switch will turn off the system when not in use.